



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,465	01/08/2002	Carleton S. Hayek	1406-DARPA	9163

7590 06/18/2003

Francis A Cooch
The Johns Hopkins University
Applied Physics Laboratory
11100 Johns Hopkins Road
Laurel, MD 20723-6099

EXAMINER

EL SHAMMAA, MARY A

ART UNIT	PAPER NUMBER
----------	--------------

2881

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,465

Applicant(s)

HAYEK ET AL.

Examiner

Mary A. El-Shammaa

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01-08-2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "104" has been used to designate both concentrator and inlet. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Art Unit: 2881

Claim Objections

Claim 7 objected to because of the following informalities: On page 42, claim 7, line 2, the term “nose” should be changed to – *noise* –. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10 rejected under 35 U.S.C. 102(e) as being anticipated by Schulist et al. (6,229,842).

Regarding claims 1, 2, and 10, Schulist et al. discloses a controller that processes the mass spectrum of a sample provided by a detector of a mass spectrometer, the controller providing a constant false alarm rate (CFAR) processing of the mass spectral data received, the CFAR processing the mass spectral data to determine noise included in the mass spectral data and outputting spectral peaks when the mass spectral data exceeds a threshold that reflects the noise included in the spectral data, the output peaks being compared with the spectral peaks for known threats stored in a database and providing a notification that a known threat is present in the sample if there is a correspondence between one or more output spectral peaks and one or more spectral peaks of a known threat as stored in the database (Col. 1, Lines 45-62; Col. 3,

Art Unit: 2881

Lines 17-22; Col. 5, Lines 7-11, 50-56; Col. 8, Line 64 through Col. 9, Line 27; Col. 11, Lines 8-43).

Regarding claim 3, Schulist et al. discloses the processing of the mass spectral data by the CFAR to determine noise included in the mass spectral data comprises determining an estimate of the noise for a sample test cell of the mass spectral data, and determining when the mass spectral data exceeds a threshold that reflects the noise included in the spectral data, determination of the threshold value comprising substituting the noise estimate in a noise distribution for the mass spectrometer (Col. 1, Line 45 through Col. 2, Line 11; Col. 2, Line 62 through Col. 3, Line 22; Col. 5, Lines 7-11, 50-56; Col. 8, Line 64 through Col. 9, Line 27; Col. 11, Lines 8-43).

Regarding claim 4, Schulist et al. discloses the CFAR processing of the mass spectral data comprising creating a succession of sample test cells that each represent the signal intensity of a mass value of the mass spectral data, the width of each sample test cell being determined by the width of a resolution cell and, consequently, the width of the sample test cell, being a function of the mass value (Col. 6, Lines 52-67).

Regarding claim 5, Schulist et al. discloses the outputting of a spectral peak when the mass spectral data exceeds a threshold comprises comparing the signal intensity of the sample test cell with the threshold and outputting a spectral peak when the signal intensity exceeds the threshold (Col. 1, Line 45 through Col. 2, Line 11; Col. 2, Line 62 through Col. 3, Line 22; Col. 5, Lines 7-11, 50-56; Col. 8, Line 64 through Col. 9, Line 27; Col. 11, Lines 8-43).

Regarding claim 6, Schulist et al. discloses the processing of mass spectral data by the CFAR to determine noise included in the mass spectral data comprises determining a noise

Art Unit: 2881

estimate in the vicinity of each sample test cell based on a portion of the spectral signal near the sample test cell (Col. 4, Line 64 through Col. 5, Line 11; Col. 6, Lines 52-67).

Regarding claim 7, Schulist et al. discloses the CFAR determining the threshold that reflects the noise included in the spectral data, determination of the threshold comprising substituting the noise estimate for the sample test cell in a noise distribution for the mass spectrometer (Col. 4, Line 64 through Col. 5, Line 43; Col. 6, Lines 52-67).

Regarding claim 8, Schulist et al. discloses the output spectral peaks being evaluated with respect to an expected peak width range prior to being compared with spectral peaks for known threats stored in a database (Col. 6, Lines 52-67; Col. 7, Lines 15-40).

Regarding claim 9, Schulist et al. discloses the spectral peaks for known threats stored in the database have corresponding ranking code and, after the comparison of the output peaks with spectral peaks for known threats stored in a database determines that one or more output peaks corresponds to one or more spectral peaks for a known threat, the one or more ranking codes of the corresponding one or more spectral peaks for the threat are used to determine whether the known threat is present in the sample (Col. 6, Lines 52-67; Col. 7, Lines 15-40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulist et al.

Art Unit: 2881

Schulist et al. discloses the claimed invention except for the system being portable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the system portable, since it has been held that making an old device portable or movable without producing any new and unexpected result involves only routine skill in the art. In re Lindberg, 93 USPQ 23 (CCPA 1952).

Conclusion

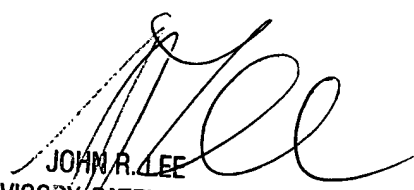
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (6,253,162).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary A. El-Shammaa whose telephone number is 703.308.0851. The examiner can normally be reached on M-F (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on 703.308.4116. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9318 for regular communications and 703.872.9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.872.9317.

mae
June 12, 2003


JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800